Missouri Botanical Garden

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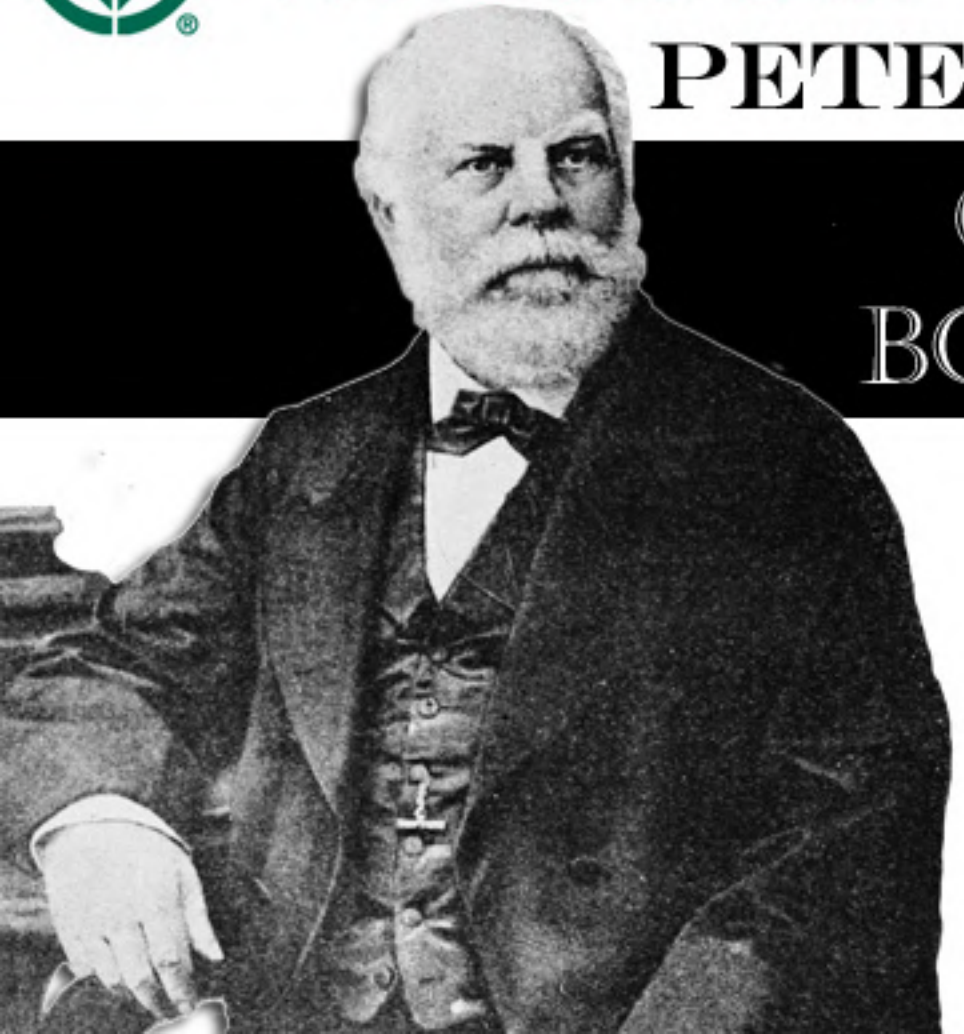
George Engelmann Botanical Notebooks



Pagination Note:
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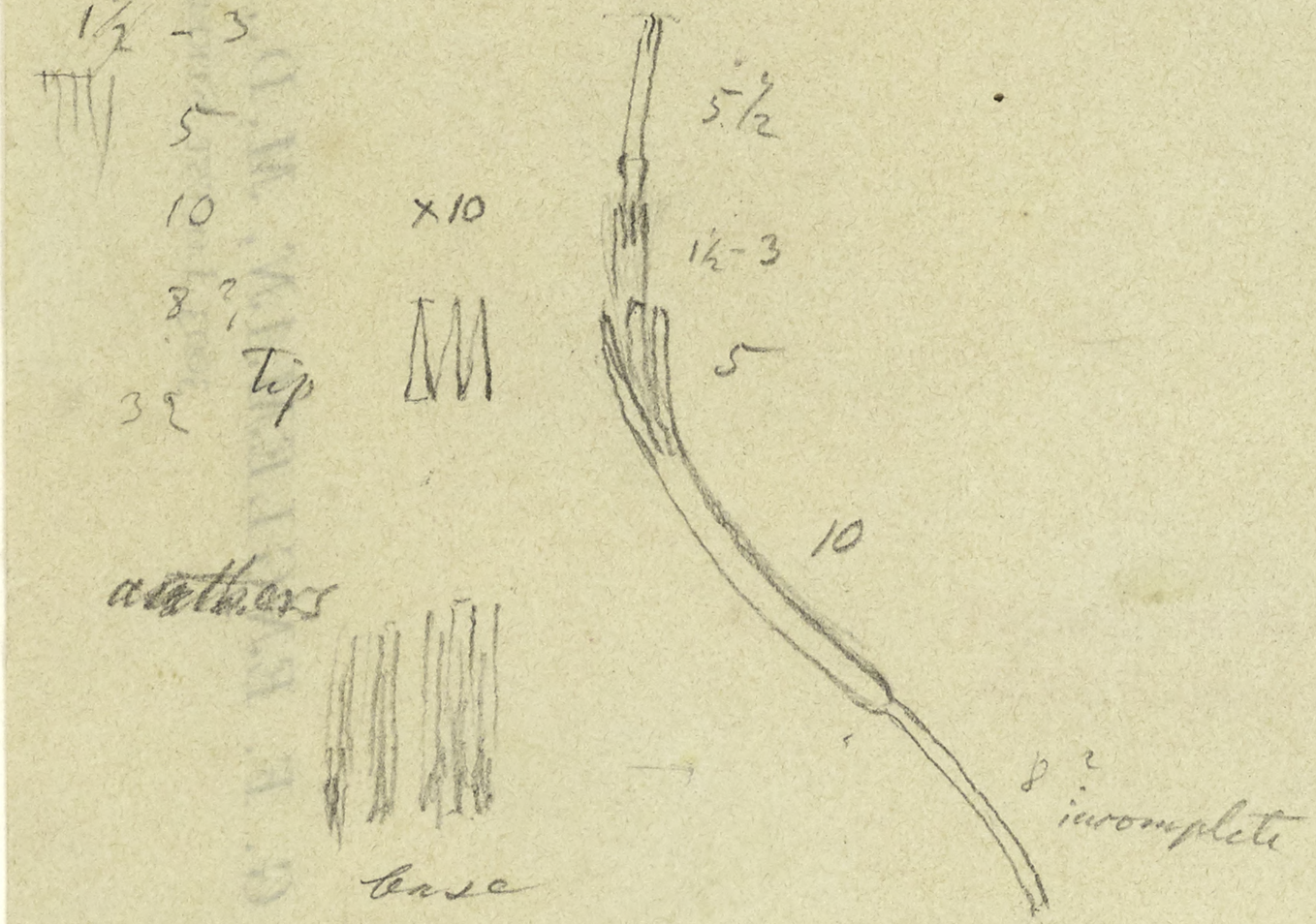
Carex alkalina

11 Carlina Curtis 1812

Sept 9 1875



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Herbarium of Asa Gray (GH)
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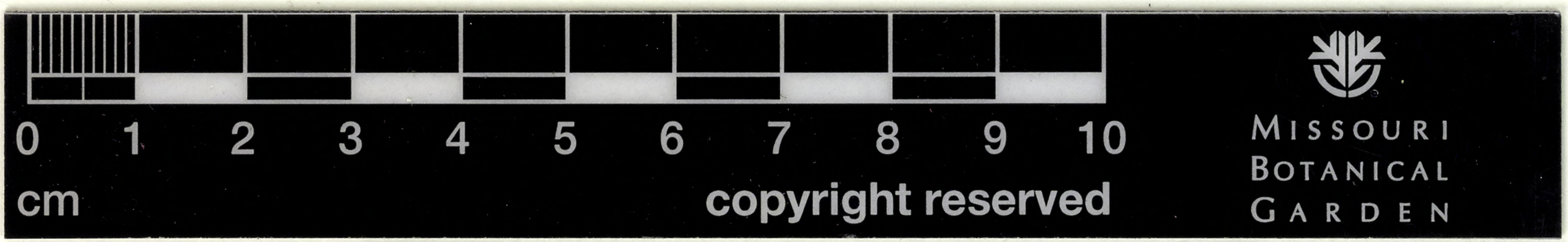
Octob 13 1874

Cirsium altissimum

heads ovl – lanceolate (flowers purple) involucrate with spinous – carinate bracts.

Scales of involucre over 200 in 21/55 order (of 13 x 21 spirals most prominent) ovate lanceolate, glandular(?) glutinous carinate upwards, arachnoid woolly on margin, terminating in a short patulous (horizontal) spine; innermost ones with a broad foliaceous lanceolate acuminate tip.



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Dr George Engelmann

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C. albisquama ? Sprk
St Louis 1833

Sept 9 1835

3
7
8
11

3

7

7

11

tube a little shorter than fauces × or limb solid
is divided to middle
outer segments →

×10

2 coll. 1874

6

6

11

tube about as long as limb
which is divided to middle

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7
3
10
8
19
3
50 (46)

Cirsium discolor Sept 8 1875

Skokomish (fresh)

7 mm

×2

3

10

8

19

take about equal to limb, which is divided to below the middle anthers inclosed (filaments retracted!)

3 mm

tip

base of anther

Pollen

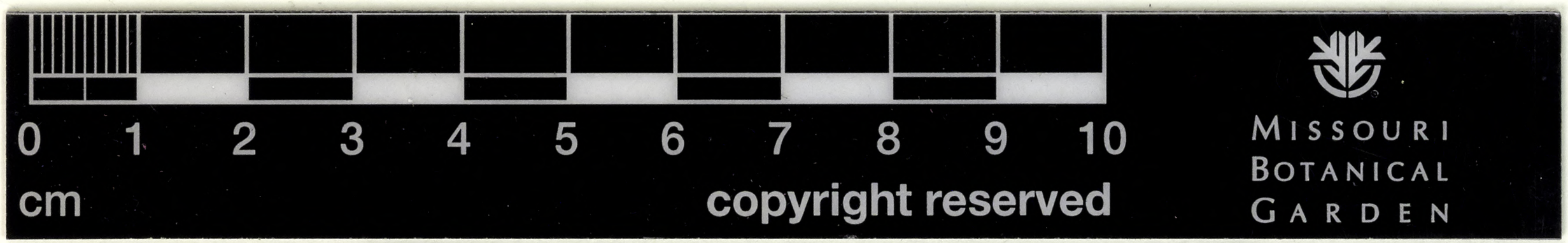
6

9

7

filaments erect, anthers exserted, discharging pollen, style not yet protruding

18



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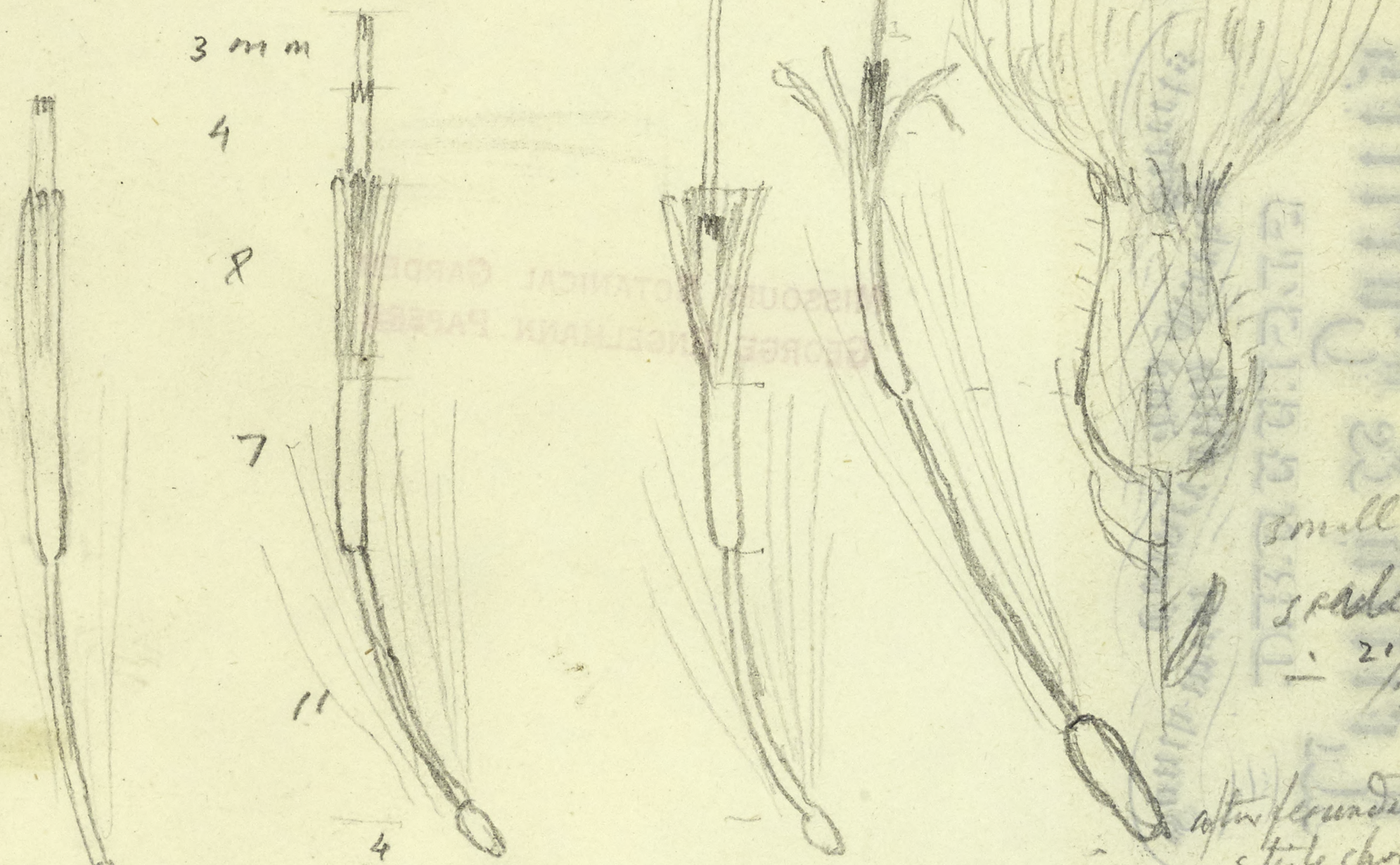
Cassia discolor

small headed upland form

leaves entire, spreading

Sept 26 1875

Skansie Canty



before pollenization

at pollenization

after pollenization

after fecundation style shorter and tube lengthened

limb four longer than tube to about middle

divided into lobes

small headed

scale

1 2/3/4

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Smith & Curtis
Druggists
Corner Fifth and Market Streets
Saint Louis

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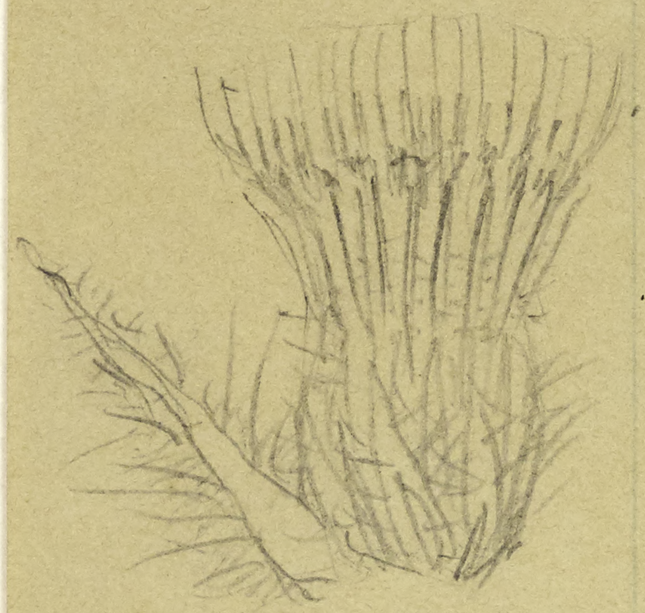
Cirs. convexpkel — Gray

Mont Flora

Longs Aug 23 1874



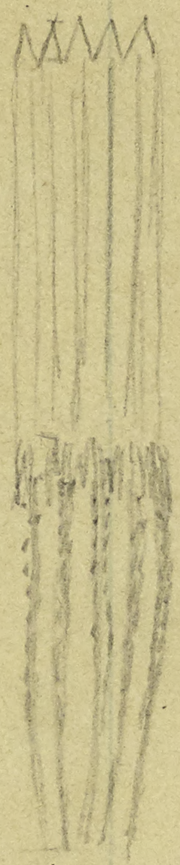
inner involucr scales as long as Corolla

A. white!

flower ×2

Involucr. scale ×2

×4?2



×2

Sept 6

×10

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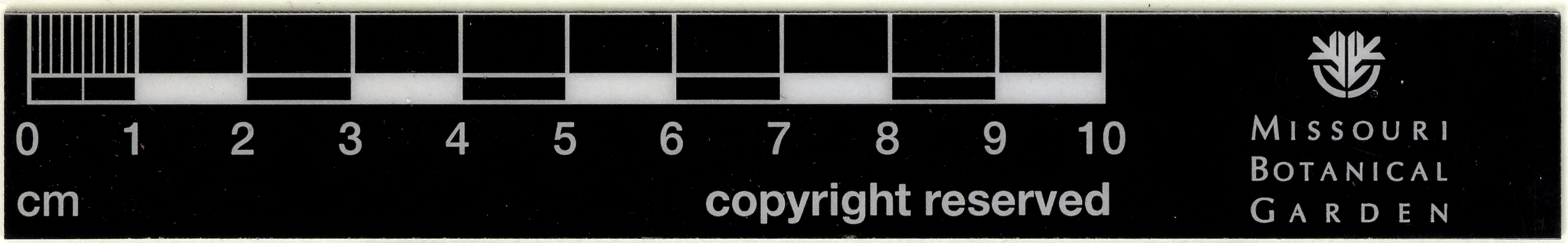


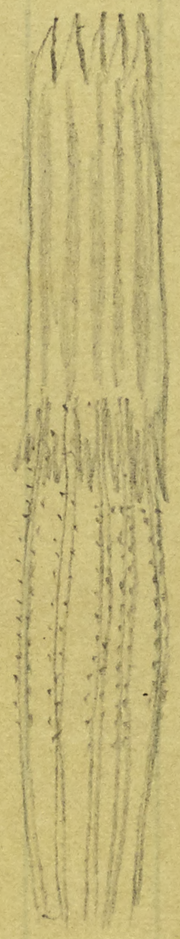
Persian Iris ? Empire Aug 21 1874
accompany

flowers white!

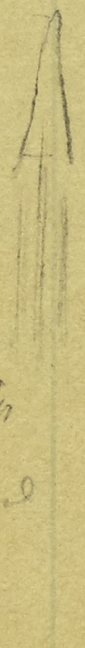
involucre lanceolate
flowers elongate

involucral scale ×2

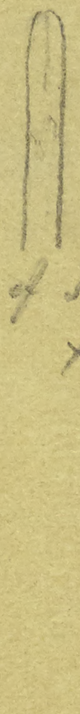
flower ×2



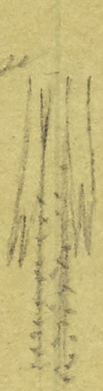
Stamineal tube laid open ×4



tip and ? of anther ×10



tip of style ×10



box

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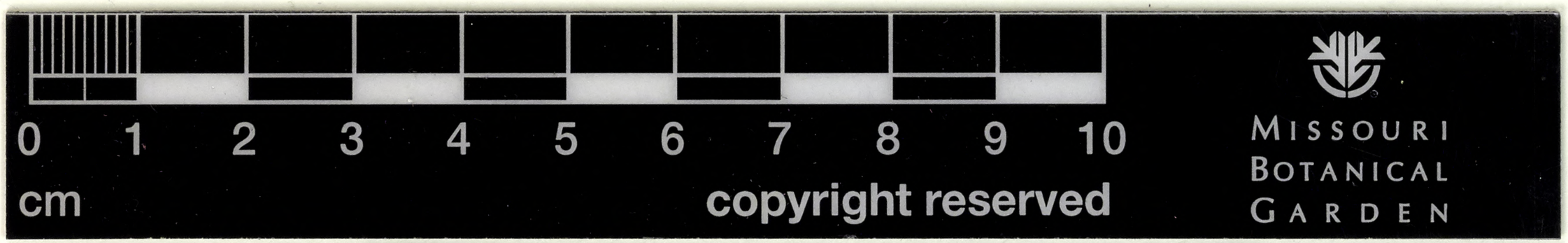

Cirsium Drummondii var acaulescens Gray

Gravelly flats at Empire City Colorado 8500 alt.

G. Engelmann Aug 3d 1874

Biennis, acaulis; foliis numerosissimis decumbentibus
linearibus longitis late albo cottatis pinnatifidis, lobis spinoso-
lobatis s. spinuloso-dentatis spinoso-ciliatis; capitulis
(solitis) (aggregatis) 15 l. longis 6 l. latis; involucri foliolis
lanceolatis, in aculeum longissimum excurrentibus

F supra glabellis, subtus praesertim versus apicem
albido-arachnoideis in aculeum longum longo-
florum albidis pappo plumoso

Stem of about 50 heads, 5 to 6 inches diameter
at first erect between them entirely covered with the
innumerable broadly spiny leaves, afterwards bending;
leaves 8-10 inches long only 1-1½ inches wide,
flowering heads about 1¼ inch long and ½ inch wide

The widened top of the stem was eaten out
by insects, and these may possibly be the cause
of this peculiar (and in that case monstrous)
growth

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Cirsium Common from Garden
to Colorado Springs, in the
Valley, 1/2-2 feet high, very
leafy, heads sessile, i e
no naked peduncle; flower-
bearing branches leafy, to base
of head

Involucre globous, consisting of
150-200 scales in 34/55 order
scales ovate-lanceolate terminating
in a long subulate point, outer and middle ones patulous,
inner ones erect

leaves deep green
and (as the stem) white woolly on the
under side

Colorado 1874

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250 scales in 34/55 order 13x21 rows 55/89
Mod Stout perhaps = Carpathian Elem

Scales with a pale or shiny shining
Keel, spines slender, yellowish, weak, petules
appressed scales with erect members
arcon (of cloud) Expressed Tip
Elem not dimmet

Rhodes 9-11 Cir diam
Kamchatka 20-25 Cir — diam
plus 4-6 feet high (11)

Carices discoloring Sept 8 '75

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St. Louis Sept 6th 75

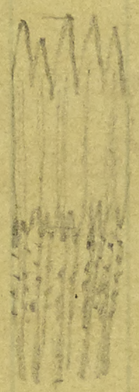
Dr G. Engelmann.

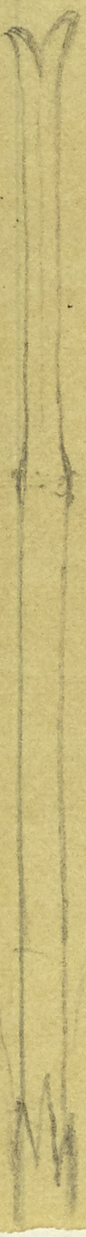
Hiermit schicke ich Ihnen
den Harlan und Ihnen
Schildkröte zurück.
Sie spielen mit Ihrer wohl
Frau und Ihr. Söhnen

C. Parryi Gr. Corsica — shrubs — Empire Aug 25 '74

for Parry

flowers yellow — Slopes near Empire





anthers rough
one gone
pollen good

long style
anthers

shorter
enclosed

outer

inner scales X2

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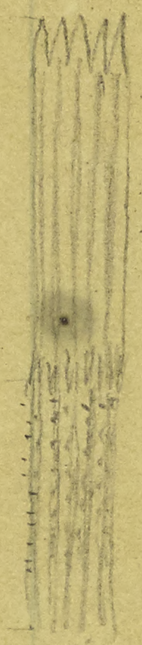
C. Parryi Gray

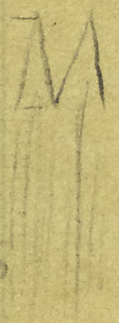
Grasum Torr. Parry p.1
Solidago 2C
Gray

Empire Aug 21- 1874

flowers
yellowish



anthers ×4

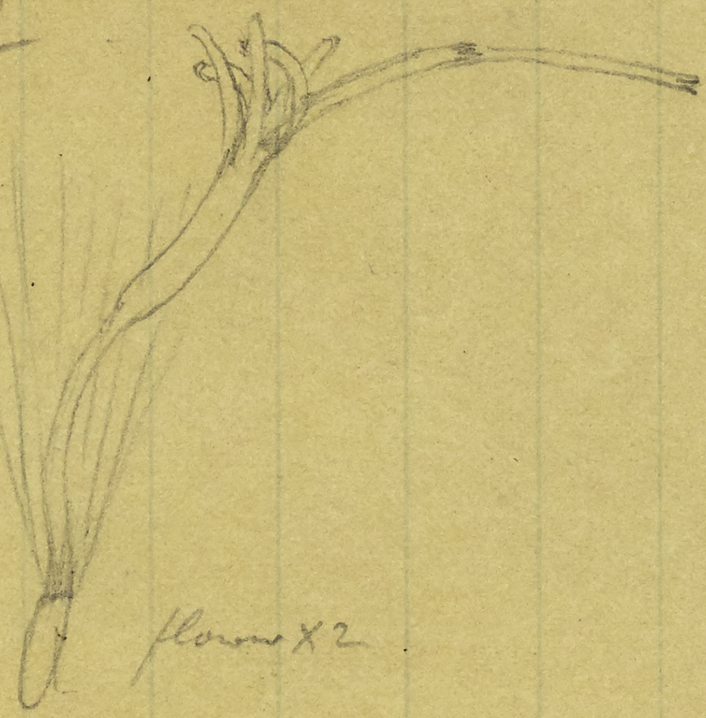


Tip

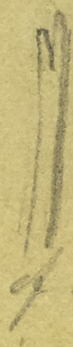
×10

base

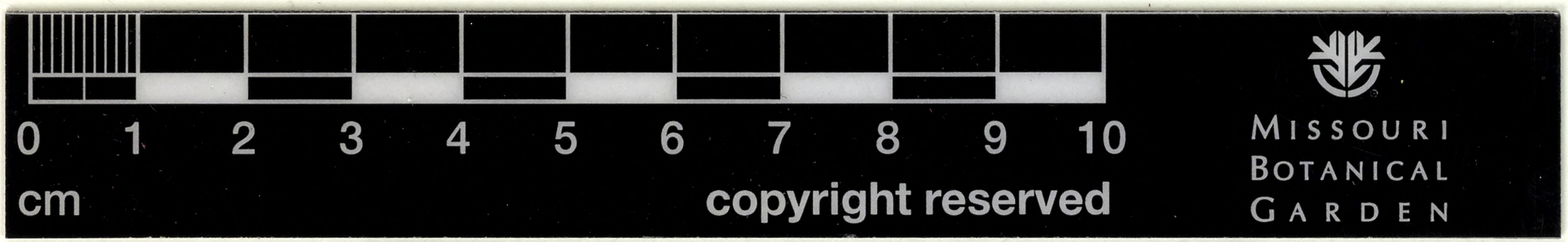
inner
involucral scale
×2



floret ×2



Tip of style ×10



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C. undulatus

Rocky slopes near Dodge (Aaronson) Aug 26

Aug 27 '14

Same near Eagle

×4

×10

K. purple

tomentose

×2

involucral scales 34/55

120–200 – number glutinous on back

Stem

mule branches

3.B.9.2.35.2

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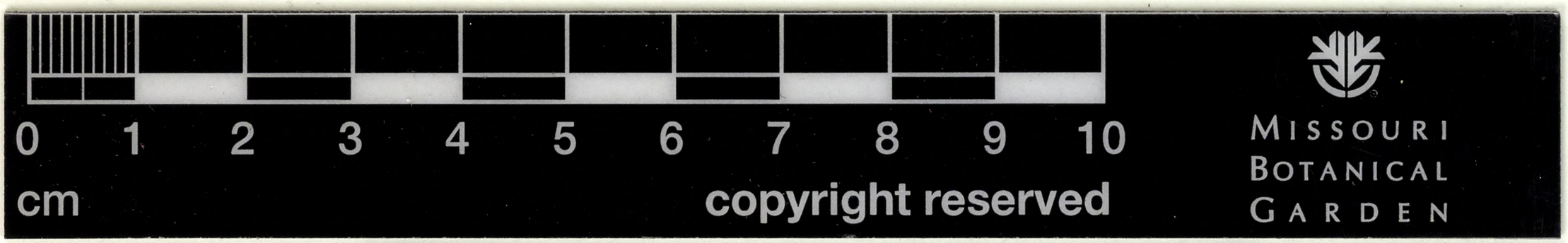


Aug 25 78

Lactuca scariola

vigorous young plant July 4th

above	37 – 44 stomata ÷ ×280 field	
below	40 – 44 " "	

stomat. ÷ □ inch

Upper side	160,000 – 180,000	
under side	170,000 – 190,000	

stinted plant, below rocks Aug.

	20 – 25 stomata
	24 – 30 "
	90,000 – 126,000
	108000 135,000

actual measurement of picture given

above	135 – 140,000
below	155 – 160,000

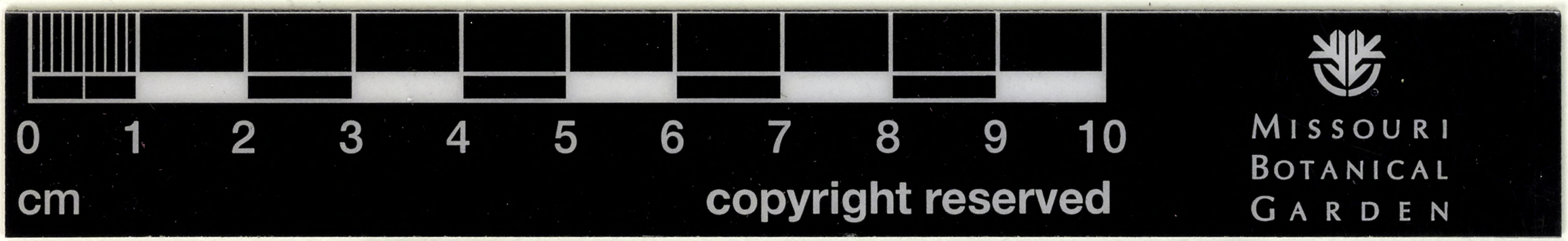
Lactuca Canadensis

? July

above	scarcely any
below	13 – 15 ÷ 280 fi. O.
	= 58000 – 66,000

! August

	scarcely any
	38 – 45
	= 170000 – 200,000



3775

4500 / 20 / 90000

4500 / 28 / 36000 / 9000 / 126000

18000 / 9 / 108000

45 / 3 / 135

4500 / 13-15 / 13500 / 4500 / 58500

215 / 95 / 66500

38 / 4500 / 19000 / 15200 / 171000

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2259

GEO. B. FRESE & CO'S,
No. 3005 Olive Street,
Near Carrison Av. ST. LOUIS.

Prescribed by
DR. GEO. ENGELMANN,
N. W. Cor. Garrison Ave. & Locust St.,

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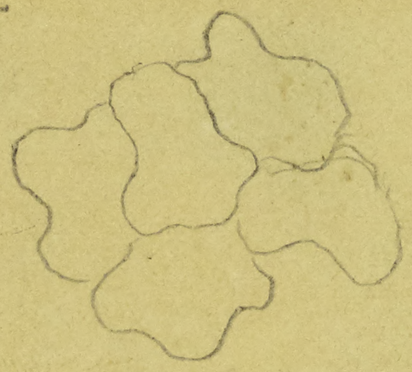
Lecture, prepared in July — rewritten Aug 25-28

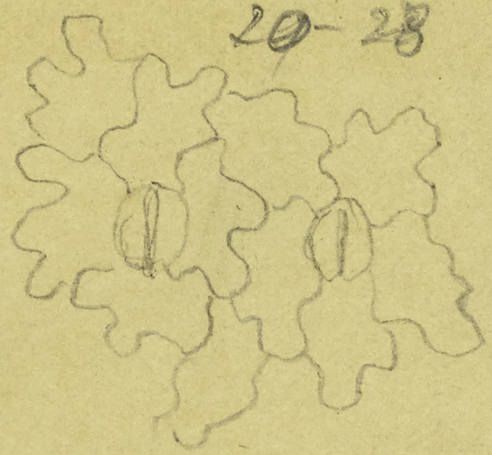
L. Canadensis ×280

upper side no stomata very few



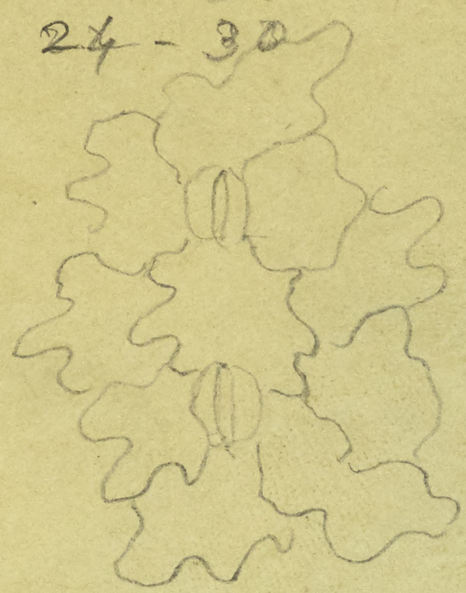
Lower side 38-45 stomata in field
stomata rather unequal in size

L. Scandica
small sp. Between rocks,
20-28



stomata smaller than in Canadensis

24-30



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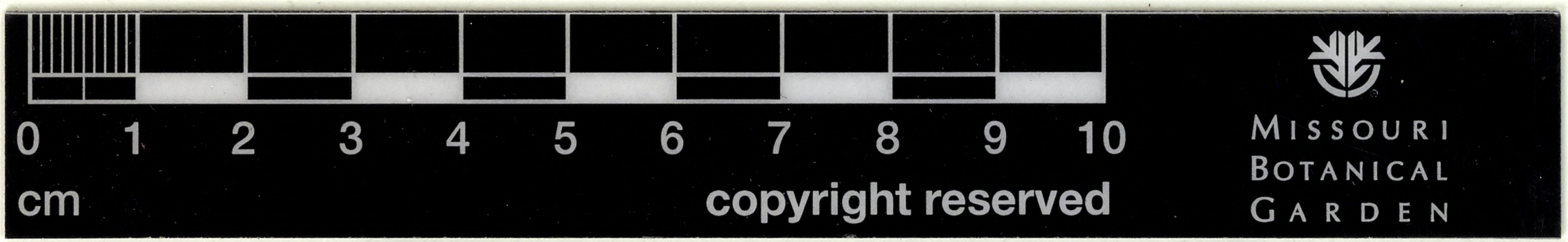
Silphia, calculation Aug 25 1878.

№ 1	on left side of slide	above ?	5–11	stom. – field of 286 magn.	= 24–40.000 in square inch
		below	?		?
2	not	above	11–14		49–63,000
		below	16–19		70–85,000
3		above	9–10		40–45 000
		below	10–12		45–54 000
4		above	10–12		45–54 000
		below	12–14		54–63 000
5		above	—		none
		below	13–14		58–63,000
6		above	5–9		24–40000
		below	11–14		49–63,000
7	Col on right side	above	10–12		45–54,000
		below	23–25		103–114.000

over



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Stomata of

St Louis — Constriction examined Aug 25 '78
magn: f. 220, ÷ field

St Louis 10-12 above = 45000-54000 ÷ □ inch
13-14 below 58000-63000

Texas 12 above = 54,000 "
12-14 below 54000-63000 "

final result

St Louis 40,000 — 60,000 above
60000 - 70,000 below

Texas

Texas + Composite 52 above, 60 or more below

Above from here many more below
south Texas many, and ÷ 1½ p. of not above

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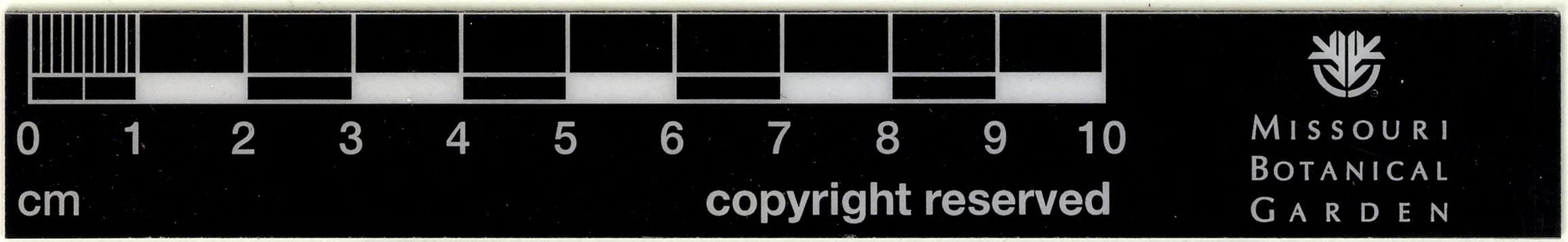
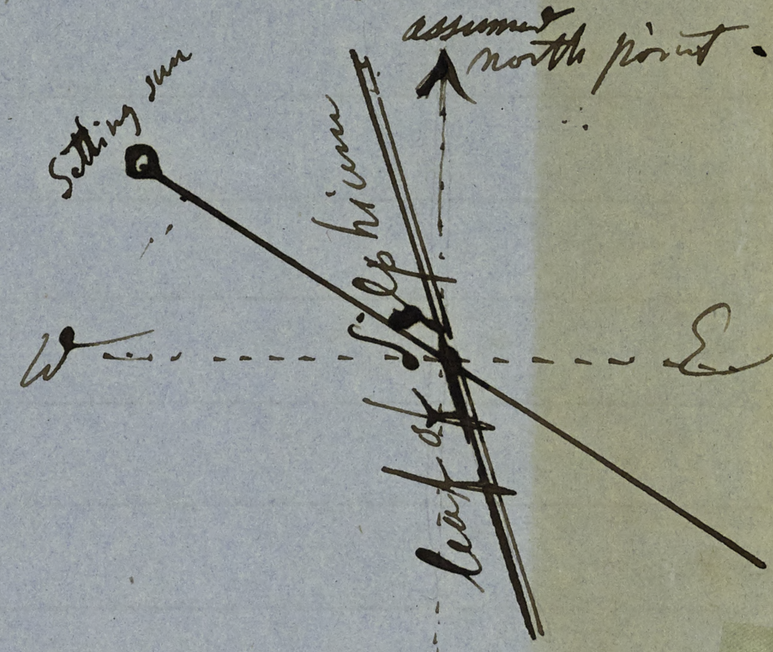


Silphium laciniatum
The Compass plant

July 24th 1853 I saw this plant today for the first time since the question of the polarity of the leaves was raised. On a meadow, on the Central Plank road, about 4 miles out I saw 3 or 4 plants just commencing to bloom. The radical leaves showed the same direction, and what was more surprising, The Cauline leaves, though their base was disposed in the regular two fifth order all around the stem, had their limb twisted so that the upper part, or two thirds of it, assumed the same direction as the radical leaves; the upper small & quite grey cauline leaves showed no such twist as yet. — —

The direction of the edges of the leaves was apparently a little to the East of North. — This direction to the setting sun was so:



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Sulphur Springs Ark St Louis Aug 5 1853

Radical leaves with their faces turned east & west. cauline leaves regularly disposed around the stem, at their base; but the upper part of the blade turned again in the east & west direction — it appears indifferent whether the upper or the lower surface faces east or west, some turn one way, some another. —

Flowers apparently all turning east! Last fruit erect.

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The part of a specimen here figured is taken about 3½ foot above the ground; the lower cauline leaves are turned with their upper part of their blades east and west; some with the upper surface east, others west;

The spicn represented here is seen from the west side, the flower is therefore seen from behind, and both leaves are turned with their upper surface to the west though base in the upper one is directed to the south a — that of the lower one 36° west of north.

5/340
72
14

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1838

Asteridium ramosissimum mihi.

= Chaetopappa asteroides Nutt

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Astem arenarioides D. Cat. : Hb.
Gray Bot. Am. Ar. VIII. 647
~~Ex~~ Extenophylla Eaton : Bot. King 152
non Gray. M. Bicarte.

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76 Aster heberladus DC p. 146

heteromallus Wender = ? A. undulatus L. p. 119
heterophyllus Willd. nec = A. cordifolius L. p. 120
heterophyllus γ. Nees = ? A. undulatus L. p. 119
hiemalis Nees = ? A. foliolosus Ait p. 149
hirsuticaulis Lindl = A. miser Lin β. p. 131

35 hirtellus Lindl pag. 122

hispidus Lam = A. puniceus L. p. 141
horizontalis Desf. = A. miser L. γ p. 130
humilis Pursh = Diplopappus cornifolius Dard. p. 183.
humilis Willd = Dipl. amygdalinus Torr. p. 183
hyssopifolius Lin = Galatella hyssopifolia Nees p. 97

Aster infirmus Mx = Diplopappus cornifolius Dard. p. 183

12 integrifolius Nutt p. 111

junceus Pursh. = A. tenuifolius L p. 132
junceus Ait = A. longifolius Lam p. 139
junceus Hortul = A. Novi belgii β. pag. 137

Aster laevigatus Pursh = ? A. novi belgii Lin p. 137
laevigatus Pursh = ? A. longifolius Lam p. 139
laevigatus Nees = A. laevis Lin p. 116
laevigatus Lam = A. brumalis Nees p. 130

23 laevis Lin p. 116

laetiflorus T & Gr. = A. laxifolius Nees β. ? p. 138

49 Lamarkianus Nees p. 131

lanceolatus Willd = ? A. simplex L p. 132

60 laxifolius Nees p. 138

54 laxus Willd p. 134

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Aster ledifolius Pursh = A. nemoralis Ait p. 158

leptophyllus Hort paris = ? A. ericoides Lin p. 123

leucanthemus Desf. = A. tenuifolius L. p. 133

linarifolius Lin = Diplopappus linarifolius Hook p. 181

3/6. Lindleyanus T. & Gr. p. 122

122 linifolius Lin p. 162

linifolius auct. = Galatella hyssopifolia Nees B. p. 97

61 longifolius Lam pag. 139

longifolius Desf. = ? A. linifolius Lin p. 162

118 lutescens T & Gr pag. 160

93 luxurians Nees p. 151

luxurians Spr. = A. luxurians Nees B. p. 151

2. Aster macrophyllus Lin p. 105

marylandicus Mx = Sericocarpus conyzoides Nees p. 102

19 Menziesii Lindl p. 113

microphyllus Torr Lindl = A. adnatus Nutt p. 114

130 mirabilis T & Gr 165

48 miser Lin Ait p. 129

miser Lam = A. purpuratus Nees p. 153

71 modestus Lindl. p. 145

5 montanus Rich. p. 107

montanus Nutt = A. sericeus Vent B. p. 112

73 multiceps Lindl pag 146

39 multiflorus Ait p. 124

multiflorus Nutt = A. Fradesantii Lin B. p. 129

96 mutabilis Lin pag. 152 = ? A. squamosus Nees p. 150

mutabilis Ait = A. longifolius Lam p. 139

mutabilis Nees = A. laevis Lin p. 116

65 mutatus T & Gr p. 142

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112 Aster nemoralis Ait p. 158

70 novae Angliae L. p. 144

57 Novi Belgii L p. 136

Novi Belgii var. Bigel. = A. simplex B. p. 132

Novi Belgii Willd = A. brumalis Nees p. 150

nudiflorus Nutt = A. radula Ait B. p. 106

41 Nuttallii T & Gr p. 126

26 Aster obliquus Nees p. 148

obliquus Lindl = A. simplex B. p. 132

68 oblongifolius Nutt p. 143

obovatus Ell = Diplopappus obovatus T. & Gr. p. 184

127 occidentalis Nutt p. 164

100 onustus Nees p. 153

oolentangiensis Riddl = A. azureus Lindl. p. 118

124 oreganus Nutt p. 163

Aster pallens Willd. = A. patulus Lam β. p. 148

10 paludosus Ait p. 109

paludosus Nutt = A. elodes T&Gr. p. 136

paniculatus Willd = A. patulus Lam p. 148

paniculatus Lam = A. lamarkianus Nees p. 131

paniculatus Nees & Ait = A. cordifolius Lin p. 120

paniculatus Nutt = A. undulatus L. p. 119

paniculatus Muhl Ell = A. sagittifolius Willd p. 121

paniculatus β Hook = A. Lindleyanus T & Gr. p. 122

parviflorus Darl. = A. miser L. γ. p. 130

parviflorus Lindl = ? A. Lamarkianus Nees p. 131

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22 Aster patens Ait p. 114
patens Bart. = A. undulatus L. p. 119
patentissimus Lindl = A. patens Ait γ pag. 115
84 patulus Lam p. 148
126 pauciflorus Nutt p. 164
pauciflorus martens = A. ericoides B. p. 503
pendulus Ait Nees = A. miser L. γ. p. 130
pennsylvanicus Poir = A. laevis L. p. 116
108 peregrinus Britt p. 155
peregrinus Less = A. foliaceus Lindl p. 156
phlogifolius Muhl wild = A. patens Ait δ pag 115
17 phyllolepis T & Gr. p. 113
plantaginifolius Nutt. = Sericocarpus conyzoides Nees p. 102
pilosus wild = A. ericoides L. β. p. 124
politus Nees = A. laevis L. β. p. 116
polyphyllus wild = A. tenuifolius L. p. 132
55 praealtus Poir p. 135
82 praecox Wild p. 147
praecox Lindl = A. Lindleyanus T & G. β. p. 122
64. prenanthoides Muhl p. 141
prenanthoides Nees = A. luxurians Nees p. 157
117 ptarmicoides T & Gr. p. 160
pubescens Hornem = A. cordifolius L p. 120
pulcherrimus Lodd = Diplopappus linariifolius Hook p. 181
63 puniceus Lin p. 140
101 purpuratus Nees p. 153
104 pygmaeus Lindl p. 154

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25 Aster conspicuus Wild p 117

18 concolor Li p. 113

98 confertus Nees p 153

confertus Desf. = A onustus Nees p. 153

6 conspicuus Lindl p. 107

conyzoides Wild = Serrocarpus conyzoides Nees p. 102

31 cordifolius Lii p. 120

cordifolius Mx = A dumosus L β. p. 128

cordifolius Hook = A. Baldwini T. & Gr. β. p. 127

corniifolius Muhl wild = Diplopappus corniifolius Dest. p. 182

Cornuti Mull. = A abbreviatus Nees. p. 148

Cornuti Wendl = A patulus Lam p. 148

1. corymbosus Ait p. 104

11 Curtisii T. & G. p. 110

cyaneus Nees. Hoff = A. laevis L. p. 116

cyaneus Ell = ? A. conspicuus Wild. p. 117

Aster denudatus Nutt = A adscendens Lindl p. 111

diffusus Ait. Nees etc = A. miser L. γ. p. 130

123 divaricatus Nutt p. 163

divaricatus Lin ? = A. corymbosus Ait p. 105

Divaricatus Lin = Diplopappus corniifolius Dest p. 182

Divergens Ait Nees etc. = A. miser L. γ. p. 130.

Divergens Lindl = A. simplex W. β p. 132

divers.folius Mx = A. undulatus Lin p 119

39 Douglasii Lindl p. 138

Drummondioides Wild = A. tenuifolius L. γ. p. 133

33 Drummondi Lindl p. 121

46 Dumosus Lin p. 128

Dumosus Hoffm. = A. simplex L p. 132

Dumosus DC Hab. = A. multiflorus Ait p. 125

115. Aster elegans T. & Gr. p. 159

elegans Wild. = A. spectabilis Ait p. 108

Elliottii T. & Gr. p. 140

62

56 elodes T. & Gr. p. 136

eminens Wild = A. longifolius Lam p. 139

38 ericoides Li p. 123

ericoides Lam Mx = A. multiflorus Ait p. 125

10. a. eryngiifolius T. & Gr. p. 502

espenbergensis Nees = A. montanus Aith p. 107

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125 Aster exilis Ell. p. 163
exscapus Richards. = Townsendia sericea Hook p. 185

40 Aster foliatus Lindl. p. 125
filaginifolius Hook = Corethrogyne filaginifolia Nutt. p. 99
firmus Nees = A. puniceus L. S. p. 141
120 flexuosus Nutt p. 161
floribundus Nutt. = A. Novi Belgii L. p. 137
109 foliaceus Lindl p. 156
88 foliosus Ait p. 149
foliosus Ait = A. dumosus L. S p. 128
foliosus Ell = A dumosus L. S. p. 128
fragilis Willd = A. Tradescanti L. S. p. 129
fragilis Lindl = A. dumosus L. p. 128
128 frondosus Nutt = pag 165

Aster glabellus Nees = A. ericoides L. p. 123
glabellus Lindl = A. ericoides L. S. p. 124
114 glabriusculus T & Gr. p. 159
106 glacialis Nutt p. 155
156 glaucus T. & Gr. p. 159
glaucus Nees. = A. laevis L. S. p. 116
131 gracilentus T & Gr. p. 166
8 gracilis Nutt. p. 108
110 graminifolius Purh p. 156
66 grandiflorus L. p. 143
grandiflorus Wall = A. spectabilis Ait p. 108
grandiflorus Nutt = A. paludosus Ait p. 109
graveolens Nutt = oblongifolius Nutt p. 144
53. Greenii T. & Gr. p. 134
Greenii Nees = A. nemoralis Ait p. 158

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44 Aster racemosus Ell. p. 124
3 Radula Ait p. 106
Radula Less = A. chilensis Nees p. 112
ramosissimus Hors pas = A. simplex Willd p. 124
ramulosus Nutt = A. Nuttallii T&G. p. 126
ramulosus α. Lindl = A. foliaceus Lindl p. 125
ramulosus β. Lindl = A. multiflorus Ait β. p. 125
recurvatus Spreng = A. squamulosus Nees p. 150
recurvatus Willd = A. thyrsiflorus Hoffm p. 149
recurvatus Pursh = A. Tradescanti L. p. 129
recurvatus Nees = A. simplex Willd β. p. 132
79. reticulatus Pursh pag. 147 = ? Diplopappus obovatus p. 503. 184.
102 retroflexus Lindl p. 154
Richardsoni Spr. = A. montanus Rich. p. 107
rigidulus Nees = A. semifolius L. γ. p. 133
rigidulus Desf = A. obliquus Nees p. 148
rivularis Less. = Erigeron asperum DC p. 170
rubricaulis Nees = A. laevis L. p. 116

32 Aster sag.ittifolius Willd p. 121
sagittifolius Ell = A. undulatus L. p. 119
salicifolius Darl. Ait? = A. simplex Willd p. 132
salicifolius Muhl = A. carneus Nees p. 133
salicifolius Ait? Pursh? = A. praealtus Poir p. 135
salicifolius Rich = A. laxifolius β. Nees β. p. 138
salicifolius Nees = A. foliosus Ait p. 149
107 salsuginosus Rich p. 155
salsuginosus Less? = A. montanus Rich β p. 107
Sayanus Nutt. = A. modestus Lindl β. p. 145
scaber Ell = A. undulatus Li p. 119
scandens Darg. Spr. = A. carolinianus Walt. p. 143

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Aster Schreberi Nees = A. macrophyllus L. β. p. 103

77 scoparius DC p. 146

secundiflorus Desf. = A. miser L. γ. p. 130

16 sericeus Vent. p. 112

serotinus Willd = A. brumalis Nees p. 150 & = A. Novi Belgii L. p. 137

28 Shortii Hook p. 118

sibiricus Torr. & Fish = A. montanus Ait p. 107

50 simplex Willd p. 131

solidagineus Mx & solidagineus Willd = Sericocarpus solidagineus Nees p. 102

sparsiflorus Purh. = A. flexuosus Nutt p. 161

spars:iflorus Mx = A. ericoides L. p. 123

spars:iflorus Nutt = A. dumosus L α. p. 128

spars:iflorus Willd = A. dumosus L β. p. 128

13 spathulatus Lindl = pag. 111

speciosus Hornem = A. spectabilis Ait p. 108

7 spectabilis Ait p. 108

spectabilis Willd = A. squarrulosus Nees p. 150

spectabilis ? Hook = A chilensis Nees p. 112

129 spinosus Benth. p. 165

spurius Willd = A. novae angliae L. p. 144

20 squarrosus Willd p. 114

squarrosus Lindl. = A. thyrsiflorus Hofm β. p. 149

90 squarrulosus Nees p. 150 perhaps to A longifolius Lam p. 140

85 stenophyllus Lindl p. 148

99 strictus Poir p. 153

strictus Purh. = A. biflorus Mx p. 106

subasper Lindl. = A. carneus Nees β. p. 133

74 subspicatus Nees p. 146

subulatus Mx = A. divaricatus Nutt p. 163 partly

subulatus Mx, Nutt etc. = A. linifolius Lin p. 162

9 surculosus Mx p. 109

surculosus DC = ? spectabilis Ait γ. p. 108

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3783

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Index to Aster in Torrey & Gray flora vol II

83. Aster abbreviatus Nees p. 148

111 acuminatus Mx p. 157. — A. acuminatus Nees = A. abbreviatus N. p. 148.

21 adnatus Nutt. p. 114

14 adscendens Lindl. pag 111

94 adulterinus Willd p. 157 — A. adult. Lindl = A. tardiflorus L. p. 152 — A. adult hort = A. novi belg L. p. 137

87 aestivus Ait p. 149 perhaps = A. simplex Willd p. 132

albus Willd ? = A. ptarmicoides T & Gr. p. 160

altissimus Mill = A. puniceus L. p. 141

103 alpinus L p. 154

amoenus Lam = A. puniceus Lin p. 141

amplexicaulis Mx = A. patens Ait p. 115

amplexicaulis Nees = A. laevis L. p. 116 (mihi Willd)

amplexicaulis Lam = A. Novae angliae L. p. 144

58 amplus Lindl pag. 137

69. amethystinus Nutt. pag 144

amygdalinus Lam. Ell = Diplopappus amygdalinus T & Gr. p. 183

A. amygdalinus Mx Pursh = Dipl. umbellatus T & Gr. p. 184

105 andinus Nutt p. 154

121 angustus T. & Gr. p. 162 A. angustus Nees = A. tenuifolius L. γ. p. 133

annuus Lin = Erigeron annuum Pers p. 175.

71. a anomalus English p. 503.

argenteus Mx. = A. sericeus Vent. p. 112

argutus Nees = ? A. squamosus Nees. p. 150

Arnottii Nees = A. patens Ait γ. p. 115

artemisiaefolius Poir = A. tenuifolius L. γ. p. 133

91 asper Nees p. 150

asperrimus Nutt. = A grandiflorus Lin p. 143

30 asperulus T & Gr p. 120

attenuatus Lindl = A. virgatus Ell δ. p. 116

81 auritus Lindl. p. 147 perhaps = A. patens Ait δ pag 115

27 azureus Lindl p. 118

autumnalis Wenderoth = A. undulatus Lin p. 119

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45. A. Baldwini T. & Gr. pag. 127

bellidiflorus Willd, Nees = A. tenuiflorus L & G. pag 133

biennis Nutt = Dieteria canescens Nutt p. 101

biennis Torr = A. multiflorus Ait f. p. 125.

4 biflorus Mx p. 106

78. bifrons Lind C. p. 146

75 blandus Pursh p. 146

borealis T & Gr. var of A. lax. florus Nees ? p. 138

43 bracteolatus Nutt p. 126 perhaps = A. foliatus Lind p. 125

92 brumalis Nees p. 150.

bupleurifolius Hort Monsp. = A. laevis L. β p. 116

bonariensis Spr. = Erigeron glaucum Ker. p. 172

72 A. caemlesrens DC p. 145

caespitosus Hort. = A. tardiflorus Lis. p. 157

californicus Less = Erigeron glaucum Ker p. 172

42 campestris Nutt p. 126

canescens Pursh = Dieteria canescens Nutt. p. 101

52 carneus Nees p. 133

67 carolinianus Wild p. 143

119 Chapmani T. & Gr. p. 161

15 Chilensis Nees p. 112

80 ciliatus Walt p. 147

ciliatus Nutt = A. phyllolepis T. & Gr. p. 113

ciliatus Muhl Willd = A. multiflorus Ait pag 125

ciliatifolius Nutt. var of A. adscendens Lindl. p. 111

37. ciliolatus Lindl p. 123

Collinsii Nutt = Seriocarpus tortifolius β. pag 103

95 Aster tardiflorus Lin p. 151

51 tenuifolius Lin p. 132

tenuifolius Willd. part. = A. ericoides Lin p. 123

tenuifolius Ell = A. Tradescanti L. β. p. 129

89 thyrsiflorus Hoffm p. 149 perhaps from A. lax. folius Nees

Tilesii Wikstr. = A. peregrinus Pursh p. 155 p 134

tomentellus Hook = Corethrogyne tomentella T&Gr. p. 99

tortifolius Mx = Xerocarpus tortifolius Nees p. 103

47 Tradescanti Lin p. 129

Tradescanti Nees = A. Lamarkianus Nees p. 131

Tradescanti Link partly = A. tenuifolius Lin p 132

Tradescanti Hoffm = A. patulus Lam p. 148

26 turbinellus Lindl p. 117

Aster umbellatus Mill. Willd &c. = Diplopappus umbellatus T&Gr. p. 184

unalaschkensis Less. = A. salsuginosus Rich. p. 155

unalaschkensis β. Hook = A. mutatus T&Gr. p. 142

29 undulatus L. Sist p. 119

undulatus Lin = A. patens Ait. p. 115

uniflorus Mx = A. nemoralis Ait p. 158

34 uropthyllus Lindl p. 122 = ? A. sagittifolius Willd. p. 121

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Aster vernus Li. = Erigeron vernum T&Gr. p. 177

97 versicolor Willd p. 152

villosus Mx = A. ericoides L. p. 124

vimineus Willd. = A. puniceus Li p. 141

24 virgatus Ell p. 116

virgatus Nees = A. praealtus Poir p. 135

virgineus Nees = A. longifolius Lam p. 130

113 Aster Xylorrhiza T&Gr. pag. 158

37884

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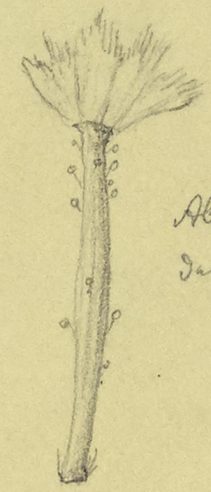
Digossum
~~dimorphogossum~~ trachyospermum mihi
Justitia brachyata Forsk. ?

Blume

Dr. Lyall D. virgatum mihi

Achenie
Der Strahlenblüthe



Abortive Achenie
der Mittelblüthe.

Asteridium

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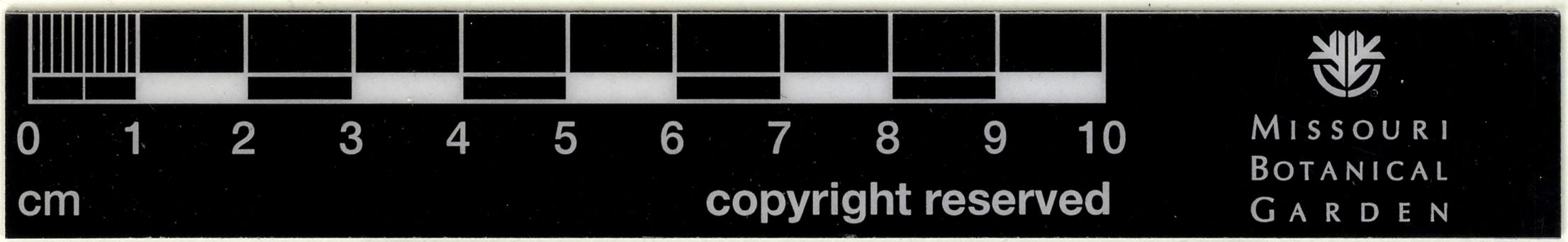

Madiae ex Gray = Bot Contrib.

Proc Am Ac. 9. p. 187

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